

A

Printer Commands

Introduction

This appendix lists HP printer language commands. Table A-1 lists PCL 5 commands in hierarchical order and gives the decimal and hexadecimal equivalents of each. Table A-2 lists HP-GL/2 commands, where as Table A-3 lists control codes.

Note

Values in parentheses “(x)” identify the lower case of the termination character which is used for combining commands.

Table A-1. HP PCL 5 Commands

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIIMAL VALUE
JOB CONTROL COMMANDS				
Reset				
Configuration (AppleTalk)	Key/Value data pair	Ⓔ&b#W[data]	027 038 098 #...# 87	1B 26 62 #...# 57
Universal Exit Language (ULE)	—	Ⓔ%–12345X	027 037 045 049 050 051 052 053 088	1B 25 2D 31 32 33 34 35 58
Reset	—	ⒺcE	027 069	1B 45
Number of Copies	# of Copies	Ⓔc&l#X (x)	027 038 108 #...# 088	1B 26 6C #...# 58 (78)
Simplex/Duplex Print	Simplex	Ⓔc&l0S (s)	027 038 108 048 083	1B 26 6C 30 53 (73)
	Duplex			
	Long Edge Binding	Ⓔc&l1S (s)	027 038 108 049 083	1B 26 6C 31 53 (73)
	Short Edge Binding	Ⓔc&l2S (s)	027 038 108 050 083	1B 26 6C 32 53 (73)
Long-Edge (Left) Offset Registration	# of Decipoints (1/720")	Ⓔc&l#U (u)	027 038 108 #...# 085	1B 26 6C #...# 55 (75)
Short-Edge (Top) Offset Registration	# of Decipoints (1/720")	Ⓔc&l#Z (z)	027 038 108 #...# 090	1B 26 6C #...# 5A (7A)
Page Side Selection	Next Side	Ⓔc&a0G (g)	027 038 097 048 071	1B 26 61 30 47 (67)
	Front Side	Ⓔc&a1G (g)	027 038 097 049 071	1B 26 61 31 47 (67)
	Back Side	Ⓔc&a2G (g)	027 038 097 050 071	1B 26 61 32 47 (67)
Job Separation	—	Ⓔc&l1T (t)	027 038 108 049 084	1B 26 6C 31 54 (74)
Output (Media) Bin Selection	Automatic selection	Ⓔc&l0G (g)	027 038 108 048 071	1B 26 6C 30 47 (67)
	Upper Output Bin (Bin #1)	Ⓔc&l1G (g)	027 038 108 049 071	1B 26 6C 31 47 (67)
	Rear Output Bin ¹ (Bin #2)	Ⓔc&l2G (g)	027 038 108 050 071	1B 26 6C 32 47 (67)
	Selects Bin #3	Ⓔc&l3G (g)	027 038 108 051 071	1B 26 6C 33 47 (67)
	Selects Bin #4	Ⓔc&l4G (g)	027 038 108 052 071	1B 26 6C 34 47 (67)
	Selects Bin #5	Ⓔc&l5G (g)	027 038 108 053 071	1B 26 6C 35 47 (67)
	Selects Bin #6	Ⓔc&l6G (g)	027 038 108 054 071	1B 26 6C 36 47 (67)
	Selects Bin #7	Ⓔc&l7G (g)	027 038 108 055 071	1B 26 6C 37 47 (67)
	Selects Bin #8	Ⓔc&l8G (g)	027 038 108 056 071	1B 26 6C 38 47 (67)
	Selects Bin #9	Ⓔc&l9G (g)	027 038 108 057 071	1B 26 6C 39 47 (67)
	Selects Bin #10	Ⓔc&l10G (g)	027 038 108 049 048 071	1B 26 6C 31 30 47 (67)
Selects Bin #11	Ⓔc&l11G (g)	027 038 108 049 049 071	1B 26 6C 31 31 47 (67)	

¹ For HP LaserJet 5Si/5SiMx printers, Ⓔc&l2G selects the "printer left/face up bin," which is not available when the High Capacity Output (HCO) is attached.

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
Unit of Measure	# Number of units per inch	Ⓜ&#D (d)	027 038 117 #...# 068 (100)	1B 26 75 #...# 44 (64)
Mechanical Print Quality	Normal	Ⓜ*o0Q (q)	027 042 111 048 081 (113)	1B 2A 6F 30 51 (71)
	Better	Ⓜ*o1Q (q)	027 042 111 049 081 (113)	1B 2A 6F 31 51 (71)
	Best	Ⓜ*o2Q (q)	027 042 111 050 081 (113)	1B 2A 6F 32 51 (71)
Media Type	Plain	Ⓜ&l0M (m)	027 038 108 048 077 (109)	1B 26 6C 30 4D (6D)
	Bond	Ⓜ&l1M (m)	027 038 108 049 077 (109)	1B 26 6C 31 4D (6D)
	Special	Ⓜ&l2M (m)	027 038 108 050 077 (109)	1B 26 6C 32 4D (6D)
	Glossy	Ⓜ&l3M (m)	027 038 108 051 077 (109)	1B 26 6C 33 4D (6D)
	Transparency	Ⓜ&l4M (m)	027 038 108 052 077 (109)	1B 26 6C 34 4D (6D)
	Negative Motion	Contains negative motion	Ⓜ&a0N (n)	027 038 097 048 078 (110)
Does not contain negative motion		Ⓜ&a1N (n)	027 038 097 049 078 (110)	1B 26 61 31 4E (6E)
PAGE CONTROL COMMANDS				
Page Length and Size				
Paper Source	Eject Page	Ⓜ&l0H (h)	027 038 108 048 072 (104)	1B 26 6C 30 48 (68)
	Main Paper Source	Ⓜ&l1H (h)	027 038 108 049 072 (104)	1B 26 6C 31 48 (68)
	Manual Feed	Ⓜ&l2H (h)	027 038 108 050 072 (104)	1B 26 6C 32 48 (68)
	Manual Envelope Feed	Ⓜ&l3H (h)	027 038 108 051 072 (104)	1B 26 6C 33 48 (68)
	Alternate Paper Source	Ⓜ&l4H (h)	027 038 108 052 072 (104)	1B 26 6C 34 48 (68)
	Optional Large Paper Source	Ⓜ&l5H (h)	027 038 108 053 072 (104)	1B 26 6C 35 48 (68)
	Envelope Feeder	Ⓜ&l6H (h)	027 038 108 054 072 (104)	1B 26 6C 36 48 (68)
	Auto Select	Ⓜ&l7H (h)	027 038 108 055 072 (104)	1B 26 6C 37 48 (68)
	Tray 1 (right tray)	Ⓜ&l8H (h)	027 038 108 056 072 (104)	1B 26 6C 38 48 (68)
	Page Size	Executive	Ⓜ&l1A (a)	027 038 108 049 065 (97)
Letter		Ⓜ&l2A (a)	027 038 108 050 065 (97)	1B 26 6C 32 41 (61)
Legal		Ⓜ&l3A (a)	027 038 108 051 065 (97)	1B 26 6C 33 41 (61)
Ledger		Ⓜ&l6A (a)	027 038 108 054 065 (97)	1B 26 6C 36 41 (61)
A3		Ⓜ&l27A (a)	027 038 108 050 055 065 (97)	1B 26 6C 32 37 41 (61)
A4		Ⓜ&l26A (a)	027 038 108 050 054 065 (97)	1B 26 6C 32 36 41 (61)
A5		Ⓜ&l25A (a)	027 038 108 050 053 065 (97)	1B 26 6C 32 35 41 (61)
A6		Ⓜ&l24A (a)	027 038 108 050 052 065 (97)	1B 26 6C 32 34 41 (61)
JIS B4 Paper		Ⓜ&l46A (a)	027 038 108 052 054 065 (97)	1B 26 6C 34 36 41 (61)
JIS B5 Paper		Ⓜ&l45A (a)	027 038 108 052 053 065 (97)	1B 26 6C 34 35 41 (61)
JIS B6 Paper		Ⓜ&l44A (a)	027 038 108 052 052 065 (97)	1B 26 6C 34 34 41 (61)
Hagaki Postcard		Ⓜ&l71A (a)	027 038 108 055 049 065 (97)	1B 26 6C 37 31 41 (61)
Oufuku-Hagaki		Ⓜ&l72A (a)	027 038 108 055 050 065 (97)	1B 26 6C 37 32 41 (61)
Monarch Envelope		Ⓜ&l80A (a)	027 038 108 056 048 065 (97)	1B 26 6C 38 30 41 (61)
COM 10 Envelope		Ⓜ&l81A (a)	027 038 108 056 049 065 (97)	1B 26 6C 38 31 41 (61)
DL Envelope		Ⓜ&l90A (a)	027 038 108 057 048 065 (97)	1B 26 6C 39 30 41 (61)
C5 Envelope		Ⓜ&l91A (a)	027 038 108 057 049 065 (97)	1B 26 6C 39 31 41 (61)
B5 Envelope		Ⓜ&l100A (a)	027 038 108 049 048 048 065 (97)	1B 26 6C 31 30 30 41 (61)
Custom	Ⓜ&l101A (a)	027 038 108 049 048 049 065 (97)	1B 26 6C 31 30 31 41 (61)	

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECFIMAL VALUE
Orientation				
Orientation	Portrait	Esc&l00	(o) 027 038 108 048 079 (111)	1B 26 6C 30 4F (6F)
	Landscape	Esc&l10	(o) 027 038 108 049 079 (111)	1B 26 6C 31 4F (6F)
	Reverse Portrait	Esc&l20	(o) 027 038 108 050 079 (111)	1B 26 6C 32 4F (6F)
	Reverse Landscape	Esc&l30	(o) 027 038 108 051 079 (111)	1B 26 6C 33 4F (6F)
Print Direction	# Degrees of Rotation (counter-clockwise, 90° increments only)	Esc&a#P	(p) 027 038 097 #...# 080 (112)	1B 26 61 #...# 50 (70)
Character Text Path Direction	Horizontal	Esc&c0T	(t) 027 038 099 048 084 (116)	1B 26 63 30 54 (74)
	Vertical Rotated	Esc&c-1T	(t) 027 038 099 045 049 084 (116)	1B 26 63 2D 31 54 (74)
Margins and Text Length				
Top Margin	# of Lines	Esc&l#E	(e) 027 038 108 #...# 069 (101)	1B 26 6C #...# 45 (65)
Text Length	# of Lines	Esc&l#F	(f) 027 038 108 #...# 070 (102)	1B 26 6C #...# 46 (66)
Left Margin	# of Columns	Esc&a#L	(l) 027 038 097 #...# 076 (108)	1B 26 61 #...# 4C (6C)
Right Margin	# of Columns	Esc&a#M	(m) 027 038 097 #...# 077 (109)	1B 26 61 #...# 4D (6D)
Clear Horizontal Margins	—	Esc9	027 057	1B 39
Perforation Skip Mode				
Perforation Skip	Disable	Esc&l0L	(l) 027 038 108 048 076 (108)	1B 26 6C 30 4C (6C)
	Enable	Esc&l1L	(l) 027 038 108 049 076 (108)	1B 26 6C 31 4C (6C)
Horizontal Column Spacing				
Horizontal Motion Index (HMI)	# of 1/120" Increments	Esc&k#H	(h) 027 038 107 #...# 072 (104)	1B 26 6B #...# 48 (68)
Vertical Line Spacing				
Vertical Motion Index (VMI)	# of 1/48" Increments	Esc&l#C	(c) 027 038 108 #...# 067 (99)	1B 26 6C #...# 43 (63)
Line Spacing (Lines per inch)	1 line/inch	Esc&l1D	(d) 027 038 108 049 068 (100)	1B 26 6C 31 44 (64)
	2 lines/inch	Esc&l2D	(d) 027 038 108 050 068 (100)	1B 26 6C 32 44 (64)
	3 lines/inch	Esc&l3D	(d) 027 038 108 051 068 (100)	1B 26 6C 33 44 (64)
	4 lines/inch	Esc&l4D	(d) 027 038 108 052 068 (100)	1B 26 6C 34 44 (64)
	6 lines/inch	Esc&l6D	(d) 027 038 108 054 068 (100)	1B 26 6C 36 44 (64)
	8 lines/inch	Esc&l8D	(d) 027 038 108 056 068 (100)	1B 26 6C 38 44 (64)
	12 lines/inch	Esc&l12D	(d) 027 038 108 049 050 068 (100)	1B 26 6C 31 32 44 (64)
	16 lines/inch	Esc&l16D	(d) 027 038 108 049 054 068 (100)	1B 26 6C 31 36 44 (64)
	24 lines/inch	Esc&l24D	(d) 027 038 108 050 052 068 (100)	1B 26 6C 32 34 44 (64)
48 lines/inch	Esc&l48D	(d) 027 038 108 052 056 068 (100)	1B 26 6C 34 38 44 (64)	
ALPHANUMERIC ID				
Alphanumeric ID	# of bytes	Esc&n#W[operation] [String]	027 038 110 #...# 087	1B 26 6E #...# 57

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
CURSOR POSITIONING				
Vertical and Horizontal				
Vertical Position	# of Rows	$\text{E}_c\&\text{a}\#R$ (<i>r</i>)	027 038 097 #...# 082 (114)	1B 26 61 #...# 52 (72)
	# of Units	$\text{E}_c*\text{p}\#Y$ (<i>y</i>)	027 042 112 #...# 089 (121)	1B 2A 70 #...# 59 (79)
Horizontal Position	# of Decipoints	$\text{E}_c\&\text{a}\#V$ (<i>v</i>)	027 038 097 #...# 086 (118)	1B 26 61 #...# 56 (76)
	# of Columns	$\text{E}_c\&\text{a}\#C$ (<i>c</i>)	027 038 097 #...# 067 (99)	1B 26 61 #...# 43 (63)
	# of Units	$\text{E}_c*\text{p}\#X$ (<i>x</i>)	027 042 112 #...# 088 (120)	1B 2A 70 #...# 58 (78)
Half Line Feed	# of Decipoints	$\text{E}_c\&\text{a}\#H$ (<i>h</i>)	027 038 097 #...# 072 (104)	1B 26 61 #...# 48 (68)
		$\text{E}_c=$	027 061	1B 3D
End-of-Line Termination				
Line Termination	CR=CR; LF=LF; FF=FF	$\text{E}_c\&\text{k}0G$ (<i>g</i>)	027 038 107 048 071 (103)	1B 26 6B 30 47 (67)
	CR=CR+LF; LF=LF; FF=FF	$\text{E}_c\&\text{k}1G$ (<i>g</i>)	027 038 107 049 071 (103)	1B 26 6B 31 47 (67)
	CR=CR; LF=CR+LF; FF=CR+FF	$\text{E}_c\&\text{k}2G$ (<i>g</i>)	027 038 107 050 071 (103)	1B 26 6B 32 47 (67)
	CR=CR+LF; LF=CR+LF; FF=CR+FF	$\text{E}_c\&\text{k}3G$ (<i>g</i>)	027 038 107 051 071 (103)	1B 26 6B 33 47 (67)
Push/Pop Position				
Push/Pop Position	Push	$\text{E}_c\&\text{f}0S$ (<i>s</i>)	027 038 102 048 083 (115)	1B 26 66 30 53 (73)
	Pop	$\text{E}_c\&\text{f}1S$ (<i>s</i>)	027 038 102 049 083 (115)	1B 26 66 31 53 (73)
FONT SELECTION				
Symbol Set Selection¹				
Primary Symbol Set	ISO 60: Norwegian 1	$\text{E}_c(0D$	027 040 048 068	1B 28 30 44
	ISO 4: United Kingdom	$\text{E}_c(1E$	027 040 049 069	1B 28 31 45
	Windows 3.1 Latin 2	$\text{E}_c(9E$	027 040 057 069	1B 28 39 45
	ISO 69: French	$\text{E}_c(1F$	027 040 049 070	1B 28 31 46
	ISO 21: German	$\text{E}_c(1G$	027 040 049 071	1B 28 31 47
	ISO 15: Italian	$\text{E}_c(0I$	027 040 048 073	1B 28 30 49
	Microsoft Publishing	$\text{E}_c(6J$	027 040 054 074	1B 28 36 4A

¹ Additional symbol sets are supported, refer to Table C-1 for a list of these symbol sets.

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
Symbol Set Selection¹ - continued				
Primary Symbol Set	DeskTop	E _c (7J)	027 040 055 074	1B 28 37 4A
	PS Text	E _c (10J)	027 040 049 048 074	1B 28 31 30 4A
	MC Text	E _c (12J)	027 040 049 050 074	1B 28 31 32 4A
	Ventura International	E _c (13J)	027 040 049 051 074	1B 28 31 33 4A
	Ventura US	E _c (14J)	027 040 049 052 074	1B 28 31 34 4A
	Ventura ITC Zapf Dingbats	E _c (9L)	027 040 057 076	1B 28 39 4C
	PS ITC Zapf Dingbats	E _c (10L)	027 040 049 048 076	1B 28 31 30 4C
	ITC Zapf Dingbats Series 100	E _c (11L)	027 040 049 049 076	1B 28 31 31 4C
	ITC Zapf Dingbats Series 200	E _c (12L)	027 040 049 050 076	1B 28 31 32 4C
	ITC Zapf Dingbats Series 300	E _c (13L)	027 040 049 051 076	1B 28 31 33 4C
	Wingdings	E _c (579L)	027 040 053 055 057 076	1B 28 35 37 39 4C
	PS Math	E _c (5M)	027 040 053 077	1B 28 35 4D
	Ventura Math	E _c (6M)	027 040 054 077	1B 28 36 4D
	Math-8	E _c (8M)	027 040 056 077	1B 28 38 4D
	Symbol	E _c (19M)	027 040 049 057 077	1B 28 31 39 4D
	ISO 8859-1 (ECMA-94) Latin 1	E _c (0N)	027 040 048 078	1B 28 30 4E
	ISO 8859-2: Latin 2	E _c (2N)	027 040 050 078	1B 28 32 4E
	ISO 8859-9: Latin 5	E _c (5N)	027 040 053 078	1B 28 35 4E
	ISO 11: Swedish	E _c (0S)	027 040 048 083	1B 28 30 53
	ISO 17: Spanish	E _c (2S)	027 040 050 083	1B 28 32 53
	Windows 3.1 Latin 5	E _c (5T)	027 040 053 084	1B 28 35 54
	PC 1004	E _c (9J)	027 040 057 074	1B 28 39 4A
	PC 775	E _c (26U)	027 040 050 054 085	1B 28 32 36 55
Windows Baltic	E _c (19L)	027 040 049 076	1B 28 31 4C	
ISO 8859-10: Latin 6	E _c (6N)	027 040 054 078	1B 28 36 4E	

¹ Additional symbol sets are supported, refer to Table C-1 for a list of these symbol sets.

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
Symbol Set Selection¹ - continued				
Primary Symbol Set	PC Turkish	Ⓔ(9T)	027 040 057 084	1B 28 39 54
	ISO 6: ASCII	Ⓔ(0U)	027 040 048 085	1B 28 30 55
	Legal	Ⓔ(1U)	027 040 049 085	1B 28 31 55
	Roman-8	Ⓔ(8U)	027 040 056 085	1B 28 38 55
	Windows 3.0 Latin 1	Ⓔ(9U)	027 040 057 085	1B 28 39 55
	PC-8	Ⓔ(10U)	027 040 049 048 085	1B 28 31 30 55
	PC-8 D/N	Ⓔ(11U)	027 040 049 049 085	1B 28 31 31 55
	PC-850	Ⓔ(12U)	027 040 049 050 085	1B 28 31 32 55
	Pi Font	Ⓔ(15U)	027 040 049 053 085	1B 28 31 35 55
	PC-852	Ⓔ(17U)	027 040 049 055 085	1B 28 31 37 55
	Windows 3.1 Latin 1 (ANSI)	Ⓔ(19U)	027 040 049 057 085	1B 28 31 39 55
Windows 3.1J(Japanese)	Ⓔ(19K)	027 040 049 057 075	1B 28 31 39 4B	
Spacing				
Primary Spacing	Fixed	Ⓔ(sOP) (<i>p</i>)	027 040 115 048 080 (112)	1B 28 73 30 50 (70)
	Proportional	Ⓔ(s1P) (<i>p</i>)	027 040 115 049 080 (112)	1B 28 73 31 50 (70)
Pitch				
Primary Pitch	# Characters/inch	Ⓔ(s#H) (<i>h</i>)	027 040 115 #...# 072 (104)	1B 28 73 #...# 48 (68)
Set Pitch Mode	10.0	Ⓔ(&k0S) (<i>s</i>)	027 038 107 048 083 (115)	1B 26 6B 30 53 (73)
	Compressed (16.5-16.7)	Ⓔ(&k2S) (<i>s</i>)	027 038 107 050 083 (115)	1B 26 6B 32 53 (73)
	Elite (12.0)	Ⓔ(&k4S) (<i>s</i>)	027 038 107 052 083 (115)	1B 26 6B 34 53 (73)
Point Size				
Primary Height	# Points	Ⓔ(s#V) (<i>v</i>)	027 040 115 #...# 086 (118)	1B 28 73 #...# 56 (76)

¹ Additional symbol sets are supported, refer to Table C-1 for a list of these symbol sets.

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
Style				
Primary Style	Upright (Solid)	Esc(s0S) (s)	027 040 115 048 083 (115)	1B 28 73 30 53 (73)
	Italic	Esc(s1S) (s)	027 040 115 049 083 (115)	1B 28 73 31 53 (73)
	Condensed	Esc(s4S) (s)	027 040 115 052 083 (115)	1B 28 73 34 53 (73)
	Condensed Italic	Esc(s5S) (s)	027 040 115 053 083 (115)	1B 28 73 35 53 (73)
	Compressed (Extra Condensed)	Esc(s8S) (s)	027 040 115 056 083 (115)	1B 28 73 38 53 (73)
	Expanded	Esc(s24S) (s)	027 040 115 050 052 083 (115)	1B 28 73 32 34 53 (73)
	Outline	Esc(s32S) (s)	027 040 115 051 050 083 (115)	1B 28 73 33 32 53 (73)
	Inline	Esc(s64S) (s)	027 040 115 054 052 083 (115)	1B 28 73 36 34 53 (73)
	Shadowed	Esc(s128S) (s)	027 040 115 049 050 056 083 (115)	1B 28 73 31 32 38 53 (73)
	Outline Shadowed	Esc(s160S) (s)	027 040 115 049 054 048 083 (115)	1B 28 73 31 36 30 53 (73)
Additional style values may be obtained from the related documentation provided with HP's font products.				
PCL 5 LaserJet Printers allows the specification of complex structures (contours, outlines, shading, etc.) and widths as well as posture. Refer to the <i>PCL 5 Printer Language Technical Reference Manual</i> .				
Stroke Weight				
Primary Font Stroke Weight	Ultra Thin	Esc(s-7B) (b)	027 040 115 045 055 066 (98)	1B 28 73 2D 37 42 (62)
	Extra Thin	Esc(s-6B) (b)	027 040 115 045 054 066 (98)	1B 28 73 2D 36 42 (62)
	Thin	Esc(s-5B) (b)	027 040 115 045 053 066 (98)	1B 28 73 2D 35 42 (62)
	Extra Light	Esc(s-4B) (b)	027 040 115 045 052 066 (98)	1B 28 73 2D 34 42 (62)
	Light	Esc(s-3B) (b)	027 040 115 045 051 066 (98)	1B 28 73 2D 33 42 (62)
	Demi Light	Esc(s-2B) (b)	027 040 115 045 050 066 (98)	1B 28 73 2D 32 42 (62)
	Semi Light	Esc(s-1B) (b)	027 040 115 045 049 066 (98)	1B 28 73 2D 31 42 (62)
	Medium (book or text)	Esc(s0B) (b)	027 040 115 048 066 (98)	1B 28 73 30 42 (62)
	Semi Bold	Esc(s1B) (b)	027 040 115 049 066 (98)	1B 28 73 31 42 (62)
	Demi Bold	Esc(s2B) (b)	027 040 115 050 066 (98)	1B 28 73 32 42 (62)
	Bold	Esc(s3B) (b)	027 040 115 051 066 (98)	1B 28 73 33 42 (62)
	Extra Bold	Esc(s4B) (b)	027 040 115 052 066 (98)	1B 28 73 34 42 (62)
	Black	Esc(s5B) (b)	027 040 115 053 066 (98)	1B 28 73 35 42 (62)
	Extra Black	Esc(s6B) (b)	027 040 115 054 066 (98)	1B 28 73 36 42 (62)
	Ultra Black	Esc(s7B) (b)	027 040 115 055 066 (98)	1B 28 73 37 42 (62)

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
Primary Typeface Family ¹				
Typeface Family	LinePrinter	Ⓔ(s0T (t)	027 040 115 048 084 (116)	1B 28 73 30 54 (74)
	Albertus	Ⓔ(s4362T (t)	027 040 115 052 051 054 050 084 (116)	1B 28 73 34 33 36 32 54 (74)
	Antique Olive	Ⓔ(s4168T (t)	027 040 115 052 049 054 056 084 (116)	1B 28 73 34 31 36 38 54 (74)
	Clarendon	Ⓔ(s4140T (t)	027 040 115 052 049 052 048 084 (116)	1B 28 73 34 31 34 30 54 (74)
	Coronet	Ⓔ(s4116T (t)	027 040 115 052 049 049 054 084 (116)	1B 28 73 34 31 31 36 54 (74)
	Courier	Ⓔ(s3T (t)	027 040 115 051 084 (116)	1B 28 73 33 54 (74)
	GW-Kai	Ⓔ(s37357T (t)	027 040 115 051 055 051 053 055 084 (116)	1B 28 73 33 37 33 35 37 54 (74)
	Courier	Ⓔ(s4099T (t)	027 040 115 052 048 057 057 084 (116)	1B 28 73 34 30 39 39 54 (74)
	ITC Zapf Dingbats	Ⓔ(s4141T (t)	027 040 115 052 049 052 049 084 (116)	1B 28 73 34 31 34 31 54 (74)
	Garamond Antiqua	Ⓔ(s4197T (t)	027 040 115 052 049 057 055 084 (116)	1B 28 73 34 31 39 37 54 (74)
	Letter Gothic	Ⓔ(s4102T (t)	027 040 115 052 049 048 050 084 (116)	1B 28 73 34 31 30 32 54 (74)
	Marigold	Ⓔ(s4297T (t)	027 040 115 052 050 057 055 084 (116)	1B 28 73 34 32 39 37 54 (74)
	CG Omega	Ⓔ(s4113T (t)	027 040 115 052 049 049 051 084 (116)	1B 28 73 34 31 31 33 54 (74)
	CG Times	Ⓔ(s4101T (t)	027 040 115 052 049 048 049 084 (116)	1B 28 73 34 31 30 31 54 (74)
	Univers	Ⓔ(s4148T (t)	027 040 115 052 049 052 056 084 (116)	1B 28 73 34 31 34 38 54 (74)
	Arial	Ⓔ(s16602T (t)	027 040 115 049 054 054 048 050 084 (116)	1B 28 73 31 36 36 30 32 54 (74)
	MS Mincho	Ⓔ(s28752T (t)	027 040 115 050 056 055 053 050 084 (116)	1B 28 73 32 38 37 35 32 54 (74)
	MS Gothic	Ⓔ(s28825T (t)	027 040 115 050 056 056 050 053 084 (116)	1B 28 73 32 38 38 32 35 54 (74)
	Times New Roman	Ⓔ(s16901T (t)	027 040 115 049 054 057 048 049 084 (116)	1B 28 73 31 36 39 30 31 54 (74)
	SimHei	Ⓔ(s37110T (t)	027 040 115 051 055 049 049 048 084 (116)	1B 28 73 33 37 31 31 30 54 (74)
	SimSun	Ⓔ(s37058T (t)	027 040 115 051 055 048 053 056 084 (116)	1B 28 73 33 37 30 35 38 54 (74)
	Symbol	Ⓔ(s16686T (t)	027 040 115 049 054 054 056 054 084 (116)	1B 28 73 31 36 36 38 36 54 (74)
	Wingdings	Ⓔ(s6826T (t)	027 040 115 054 056 050 054 084 (116)	1B 28 73 36 38 32 36 54 (74)
	Wingdings	Ⓔ(s31402T (t)	027 040 115 051 049 052 048 050 084 (116)	1B 28 73 33 31 34 30 32 54 (74)
FONT DEFAULT				
Font Default	Primary Font	Ⓔ(3@	027 040 051 064	1B 28 33 40
	Secondary Font	Ⓔ)3@	027 041 051 064	1B 29 33 40
UNDERLINE				
Underline	Enable Fixed	Ⓔ&d0D (d)	027 038 100 048 068 (100)	1B 26 64 30 44 (64)
	Enable Floating	Ⓔ&d3D (d)	027 038 100 051 068 (100)	1B 26 64 33 44 (64)
	Disable	Ⓔ&d@	027 038 100 064	1B 26 64 40
TEXT PARSING METHOD				
Text Parsing Method	1-Byte	Ⓔ&t0P (p)	027 038 116 48 080 (112)	1B 26 74 30 50 (70)
	1-Byte	Ⓔ&t1P (p)	027 038 116 49 080 (112)	1B 26 74 31 50 (70)
	1-Byte/2-Byte	Ⓔ&t21P (p)	027 038 116 050 049 080 (112)	1B 26 74 32 31 50 (70)
	1-Byte/2-Byte	Ⓔ&t31P (p)	027 038 116 051 049 080 (112)	1B 26 74 33 31 50 (70)
	1-Byte/2-Byte	Ⓔ&t38P (p)	027 038 116 051 056 080 (112)	1B 26 74 33 38 50 (70)
TRANSPARENT PRINT DATA				
Transparent Print Data	# of Bytes	Ⓔ&p#X[Data]	027 038 112 #...# 088	1B 26 70 #...# 58

¹ Additional typefaces are supported, refer to Table C-2 and C-3 for a list of these symbol sets.

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
FONT MANAGEMENT				
Assign Font ID	Font ID #	ⒺⒸ*Ⓒ#D (d)	027 042 099 #...# 068 (100)	1B 2A 63 #...# 44 (64)
Font and Character Control	Delete all Fonts	ⒺⒸ*ⒸOF (f)	027 042 099 048 070 (102)	1B 2A 63 30 46 (66)
	Delete all temporary fonts	ⒺⒸ*Ⓒ1F (f)	027 042 099 049 070 (102)	1B 2A 63 31 46 (66)
	Delete last font ID specified	ⒺⒸ*Ⓒ2F (f)	027 042 099 050 070 (102)	1B 2A 63 32 46 (66)
	Delete last character specified	ⒺⒸ*Ⓒ3F (f)	027 042 099 051 070 (102)	1B 2A 63 33 46 (66)
	Make font temporary	ⒺⒸ*Ⓒ4F (f)	027 042 099 052 070 (102)	1B 2A 63 34 46 (66)
	Make font permanent	ⒺⒸ*Ⓒ5F (f)	027 042 099 053 070 (102)	1B 2A 63 35 46 (66)
	Copy/Assign the currently invoked font as temporary	ⒺⒸ*Ⓒ6F (f)	027 042 099 054 070 (102)	1B 2A 63 36 46 (66)
Soft Symbol Set Management / Creation				
Set Symbol Set	ID #	ⒺⒸ*Ⓒ#R (r)	027 042 099 #...# 082 (114)	1B 2A 63 #...# 52 (72)
Define Symbol Set	# of Bytes	ⒺⒸ(f#W[Data]	027 040 102 #...# 087	1B 28 66 #...# 57
Symbol Set Control	Delete all symbol sets	ⒺⒸ*Ⓒ0S (s)	027 042 099 048 083 (115)	1B 2A 63 30 53 (73)
	Delete all temporary symbol sets	ⒺⒸ*Ⓒ1S (s)	027 042 099 049 083 (115)	1B 2A 63 31 53 (73)
	Delete current soft symbol set (last ID#)	ⒺⒸ*Ⓒ2S (s)	027 042 099 050 083 (115)	1B 2A 63 32 53 (73)
	Make current soft symbol set temporary	ⒺⒸ*Ⓒ4S (s)	027 042 099 052 083 (115)	1B 2A 63 34 53 (73)
	Make current soft symbol set permanent	ⒺⒸ*Ⓒ5S (s)	027 042 099 053 083 (115)	1B 2A 63 35 53 (73)

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
Font Selection by ID Number				
Select font (with ID #)	ID # primary font	Ⓔ(#X	027 040 #...# 088	1B 28 #...# 58
	ID # secondary font	Ⓔ)#X	027 041 #...# 088	1B 29 #...# 58
SOFT FONT CREATION				
Font descriptor (font header)	# of bytes	Ⓔ)s#W[Data]	027 041 115 #...# 087	1B 29 73 #...# 57
Download character	# of bytes	Ⓔ)(s#W[Data]	027 040 115 #...# 087	1B 28 73 #...# 57
Character code	Character code # (decimal)	Ⓔ)*c#E <i>(e)</i>	027 042 099 #...# 069 <i>(101)</i>	1B 2A 63 #...# 45 <i>(65)</i>
GRAPHICS				
Raster Graphics				
Raster Resolution	75 dots/inch	Ⓔ)*t75R <i>(r)</i>	027 042 116 055 053 082 <i>(114)</i>	1B 2A 74 37 35 52 <i>(72)</i>
	100 dots/inch	Ⓔ)*t100R <i>(r)</i>	027 042 116 049 048 048 082 <i>(114)</i>	1B 2A 74 31 30 30 52 <i>(72)</i>
	150 dots/inch	Ⓔ)*t150R <i>(r)</i>	027 042 116 049 053 048 082 <i>(114)</i>	1B 2A 74 31 35 30 52 <i>(72)</i>
	200 dots/inch	Ⓔ)*t200R <i>(r)</i>	027 042 116 050 048 048 082 <i>(114)</i>	1B 2A 74 32 30 30 52 <i>(72)</i>
	300 dots/inch	Ⓔ)*t300R <i>(r)</i>	027 042 116 051 048 048 082 <i>(114)</i>	1B 2A 74 33 30 30 52 <i>(72)</i>
	600 dots/inch	Ⓔ)*t600R <i>(r)</i>	027 042 116 054 048 048 082 <i>(114)</i>	1B 2A 74 36 30 30 52 <i>(72)</i>

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
Raster Graphics				
Raster Graphics Presentation	Follows orientation	Esc*r0F (f)	027 042 114 048 070 (102)	1B 2A 72 30 46 (66)
	Follows physical page	Esc*r3F (f)	027 042 114 051 070 (102)	1B 2A 72 33 46 (66)
Start Raster Graphics	Left Raster Graphics Margin	Esc*r0A (a)	027 042 114 048 065 (97)	1B 2A 72 30 41 (61)
	Current Cursor	Esc*r1A (a)	027 042 114 049 065 (97)	1B 2A 72 31 41 (61)
	Scale mode (logical left page boundary)	Esc*r2A (a)	027 042 114 050 065 (97)	1B 2A 72 32 41 (61)
	Scale mode (at CAP)	Esc*r3A (a)	027 042 114 051 065 (97)	1B 2A 72 33 42 (61)
Raster Y Offset	# of Raster Lines of vertical movement	Esc*b#Y (y)	027 042 098 #...# 089 (121)	1B 2A 62 #...# 59 (79)
Set Raster Compression Mode	Unencoded	Esc*b0M (m)	027 042 098 048 077 (109)	1B 2A 62 30 4D (6D)
	Run-Length Encoded	Esc*b1M (m)	027 042 098 049 077 (109)	1B 2A 62 31 4D (6D)
	Tagged Image File Format	Esc*b2M (m)	027 042 098 050 077 (109)	1B 2A 62 32 4D (6D)
	Delta Row	Esc*b3M (m)	027 042 098 051 077 (109)	1B 2A 62 33 4D (6D)
	Adaptive Compression	Esc*b5M (m)	027 042 098 053 077 (109)	1B 2A 62 35 4D (6D)
	Replacement Delta Row	Esc*b9M (m)	027 042 098 057 077 (109)	1B 2A 98 39 4D (6D)
Transfer Raster Data (by row)	# of Bytes	Esc*b#W[Data]	027 042 098 #...# 087	1B 2A 62 #...# 57
Transfer Raster Data (by plane)	# of Bytes	Esc*b#V[Data]	027 042 062 #...# 086	1B 2A 98 #...# 56
End Raster Graphics	Old version Preferred	Esc*rB (b)	027 042 114 066 (98)	1B 2A 72 42 (62)
		Esc*rC (c)	027 042 114 067 (99)	1B 2A 72 43 (63)
Raster Height (Source)	# Raster Rows	Esc*r#T (t)	027 042 114 #...# 084 (116)	1B 2A 72 #...# 54 (74)
Raster Width (Source)	# Pixels of the Specified Resolution	Esc*r#S (s)	027 042 114 #...# 083 (115)	1B 2A 72 #...# 53 (73)
Raster Height (Destination)	# of Decipoints	Esc*t#H (h)	027 042 116 #...# 072 (104)	1B 2A 74 #...# 48 (68)
Raster Width (Destination)	# of Decipoints	Esc*t#V (v)	027 042 116 #...# 086 (118)	1B 2A 74 #...# 56 (76)
Scale Algorithm	Source with light background	Esc*t0K (k)	027 042 116 048 075 (107)	1B 2A 74 30 4B (6B)
	Source with dark background	Esc*t1K (k)	027 042 116 049 075 (107)	1B 2A 74 31 4B (6B)

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
THE PRINT MODEL				
Imaging				
Select Current Pattern	Solid Black (default)	E _c *v0T	(t) 027 042 118 048 084 (116)	1B 2A 76 30 54 (74)
	Solid White	E _c *v1T	(t) 027 042 118 049 084 (116)	1B 2A 76 31 54 (74)
	HP-defined Shading Pattern	E _c *v2T	(t) 027 042 118 050 084 (116)	1B 2A 76 32 54 (74)
	HP-defined Cross-hatched Pattern	E _c *v3T	(t) 027 042 118 051 084 (116)	1B 2A 76 33 54 (74)
	User-defined Pattern	E _c *v4T	(t) 027 042 118 052 084 (116)	1B 2A 76 34 54 (74)
Source Transparency code	Transparent Opaque	E _c *v0N	(n) 027 042 118 048 078 (110)	1B 2A 76 30 4E (6E)
		E _c *v1N	(n) 027 042 118 049 078 (110)	1B 2A 76 31 4E (6E)
Pattern Transparency Mode	Transparent Opaque	E _c *v0O	(o) 027 042 118 048 079 (111)	1B 2A 76 30 4F (6F)
		E _c *v1O	(o) 027 042 118 049 079 (111)	1B 2A 76 31 4F (6F)
Logical Operation	# = ROP3 input value	E _c *#O	(o) 027 042 108 #...# 079 (111)	1B 2A 6C #...# 4F (6F)
Pixel Placement	Grid Intersection	E _c *v0R	(r) 027 042 108 048 082 (114)	1B 2A 6C 30 52 (72)
	Pixel Placement	E _c *v1R	(r) 027 042 118 049 082 (114)	1B 2A 76 31 52 (72)
Rectangle Dimensions				
Rectangle Width (Horizontal Size)	# of dots	E _c *c#A	(a) 027 042 099 #...# 065 (97)	1B 2A 63 #...# 41 (61)
	# of decipoints	E _c *c#H	(h) 027 042 099 #...# 072 (104)	1B 2A 63 #...# 48 (68)
Rectangle Height (Vertical Size)	# of dots	E _c *c#B	(b) 027 042 099 #...# 066 (98)	1B 2A 63 #...# 42 (62)
	# of decipoints	E _c *c#V	(v) 027 042 099 #...# 086 (118)	1B 2A 63 #...# 56 (76)

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE	
Rectangular Area Fill					
Fill Rectangular Area	Solid Black	E _c *c0P (p)	027 042 099 048 080 (112)	1B 2A 63 30 50 (70)	
	Erase (solid white fill)	E _c *c1P (p)	027 042 099 049 080 (112)	1B 2A 63 31 50 (70)	
	Shaded Fill	E _c *c2P (p)	027 042 099 050 080 (112)	1B 2A 63 32 50 (70)	
	Cross-hatched Fill	E _c *c3P (p)	027 042 099 051 080 (112)	1B 2A 63 33 50 (70)	
	User-defined	E _c *c4P (p)	027 042 099 052 080 (112)	1B 2A 63 34 50 (70)	
	Current Pattern	E _c *c5P (p)	027 042 099 053 080 (112)	1B 2A 63 35 50 (70)	
Pattern ID	% of Shading or Type of Pattern or User Pattern ID	E _c *c#G (g)	027 042 099 #...# 071 (103)	1B 2A 63 #...# 47 (67)	
Shading	2% Gray	E _c *c2G (g)	027 042 099 050 071 (103)	1B 2A 63 32 47 (67)	
	10% Gray	E _c *c10G (g)	027 042 099 049 048 071 (103)	1B 2A 63 31 30 47 (67)	
	15% Gray	E _c *c15G (g)	027 042 099 049 053 071 (103)	1B 2A 63 31 35 47 (67)	
	30% Gray	E _c *c30G (g)	027 042 099 051 048 071 (103)	1B 2A 63 33 30 47 (67)	
	45% Gray	E _c *c45G (g)	027 042 099 052 053 071 (103)	1B 2A 63 34 35 47 (67)	
	70% Gray	E _c *c70G (g)	027 042 099 055 048 071 (103)	1B 2A 63 37 30 47 (67)	
	90% Gray	E _c *c90G (g)	027 042 099 057 048 071 (103)	1B 2A 63 39 30 47 (67)	
	100% Gray	E _c *c100G (g)	027 042 099 049 048 048 071 (103)	1B 2A 63 31 30 30 47 (67)	
	Pattern	1 Horiz. Line	E _c *c1G (g)	027 042 099 049 071 (103)	1B 2A 63 31 47 (67)
		2 Vert. Lines	E _c *c2G (g)	027 042 099 050 071 (103)	1B 2A 63 32 47 (67)
3 Diagonal Lines		E _c *c3G (g)	027 042 099 051 071 (103)	1B 2A 63 33 47 (67)	
4 Diagonal Lines		E _c *c4G (g)	027 042 099 052 071 (103)	1B 2A 63 34 47 (67)	
5 Square Grid		E _c *c5G (g)	027 042 099 053 071 (103)	1B 2A 63 35 47 (67)	
6 Diagonal Grid		E _c *c6G (g)	027 042 099 054 071 (103)	1B 2A 63 36 47 (67)	

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
USER DEFINED PATTERN / MANAGEMENT CREATION				
Define (Download) Pattern	# of bytes	$\text{E}_c^*c\#W[\text{Data}]$	027 042 099 #...# 087	1B 2A 63 #...# 57
User-defined Pattern Control	Delete all patterns	E_c^*c0Q (q)	027 042 099 048 081 (113)	1B 2A 63 030 51 (71)
	Delete all temporary patterns	E_c^*c1Q (q)	027 042 099 049 081 (113)	1B 2A 63 031 51 (71)
	Delete current pattern	E_c^*c2Q (q)	027 042 099 050 081 (113)	1B 2A 63 032 51 (71)
	Make pattern temporary	E_c^*c4Q (q)	027 042 099 052 081 (113)	1B 2A 63 034 51 (71)
	Make pattern permanent	E_c^*c5Q (q)	027 042 099 053 081 (113)	1B 2A 63 035 51 (71)
Set Pattern Reference Point	Rotate with orientation	E_c^*p0R (r)	027 042 112 048 082 (114)	1B 2A 70 30 52 (72)
	Follow physical page	E_c^*p1R (r)	027 042 112 049 082 (114)	1B 2A 70 31 52 (72)
MACROS				
Macro ID	Macro ID #	$\text{E}_c\&f\#Y$ (y)	027 038 102 #...# 089 (121)	1B 26 66 #...# 59 (79)
Macro Control	Start Macro Def.	$\text{E}_c\&f0X$ (x)	027 038 102 048 088 (120)	1B 26 66 30 58 (78)
	Stop Macro Def.	$\text{E}_c\&f1X$ (x)	027 038 102 049 088 (120)	1B 26 66 31 58 (78)
	Execute Macro	$\text{E}_c\&f2X$ (x)	027 038 102 050 088 (120)	1B 26 66 32 58 (78)
	Call Macro	$\text{E}_c\&f3X$ (x)	027 038 102 051 088 (120)	1B 26 66 33 58 (78)
	Enable Overlay	$\text{E}_c\&f4X$ (x)	027 038 102 052 088 (120)	1B 26 66 34 58 (78)
	Disable Overlay	$\text{E}_c\&f5X$ (x)	027 038 102 053 088 (120)	1B 26 66 35 58 (78)
	Delete Macros	$\text{E}_c\&f6X$ (x)	027 038 102 054 088 (120)	1B 26 66 36 58 (78)
	Delete All Temp. Macros	$\text{E}_c\&f7X$ (x)	027 038 102 055 088 (120)	1B 26 66 37 58 (78)
	Delete Macro ID	$\text{E}_c\&f8X$ (x)	027 038 102 056 088 (120)	1B 26 66 38 58 (78)
	Make Temporary	$\text{E}_c\&f9X$ (x)	027 038 102 057 088 (120)	1B 26 66 39 58 (78)
	Make Permanent	$\text{E}_c\&f10X$ (x)	027 038 102 049 048 088 (120)	1B 26 66 31 30 58 (78)

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECEMAL VALUE
STATUS READBACK				
Set Status Readback Location Type	Invalid Location	ⒺⒸ*s0T (t)	027 042 115 048 084 (116)	1B 2A 73 30 54 (74)
	Currently Selected	ⒺⒸ*s1T (t)	027 042 115 049 084 (116)	1B 2A 73 31 54 (74)
	All Locations	ⒺⒸ*s2T (t)	027 042 115 050 084 (116)	1B 2A 73 32 54 (74)
	Internal	ⒺⒸ*s3T (t)	027 042 115 051 084 (116)	1B 2A 73 33 54 (74)
	Downloaded	ⒺⒸ*s4T (t)	027 042 115 052 084 (116)	1B 2A 73 34 54 (74)
	Cartridge	ⒺⒸ*s5T (t)	027 042 115 053 084 (116)	1B 2A 73 35 54 (74)
	User-installed ROM (SIMMs)	ⒺⒸ*s7T (t)	027 042 115 055 084 (116)	1B 2A 73 37 54 (74)
Set Status Readback Location Unit	All entities of the Location Type	ⒺⒸ*s0U (u)	027 042 115 048 085 (117)	1B 2A 73 30 55 (75)
	Entity 1 or Temporary	ⒺⒸ*s1U (u)	027 042 115 049 085 (117)	1B 2A 73 31 55 (75)
	Entity 2 or Permanent	ⒺⒸ*s2U (u)	027 042 115 050 085 (117)	1B 2A 73 32 55 (75)
	Entity 3	ⒺⒸ*s3U (u)	027 042 115 051 085 (117)	1B 2A 73 33 55 (75)
	Entity 4	ⒺⒸ*s4U (u)	027 042 115 052 085 (117)	1B 2A 73 34 55 (75)
Inquire Status Readback Entity	Font	ⒺⒸ*s0I (i)	027 042 115 048 073 (105)	1B 2A 73 30 49 (69)
	Macro	ⒺⒸ*s1I (i)	027 042 115 049 073 (105)	1B 2A 73 31 49 (69)
	User-defined Pattern	ⒺⒸ*s2I (i)	027 042 115 050 073 (105)	1B 2A 73 32 49 (69)
	Symbol Set	ⒺⒸ*s3I (i)	027 042 115 051 073 (105)	1B 2A 73 33 49 (69)
	Font Extended	ⒺⒸ*s4I (i)	027 042 115 052 073 (105)	1B 2A 73 34 49 (69)
	Flush All Pages	Flush All Complete Pages	ⒺⒸ&r0F (f)	027 038 114 048 070 (120)
Flush All Page Data		ⒺⒸ&r1F (f)	027 038 114 049 070 (120)	1B 26 72 31 46 (66)
Free Memory Space	—	ⒺⒸ*s1M (m)	027 042 115 049 077 (109)	1B 2A 73 31 4D (6D)
Echo	# = Echo value (-32767 to 32767)	ⒺⒸ*s#X (x)	027 042 115 #...# 088 (120)	1B 2A 73 #...# 58 (78)
PROGRAMMING HINTS				
End-of-Line Wrap	Enabled	ⒺⒸ&s0C (c)	027 038 115 048 067 (99)	1B 26 73 30 43 (63)
	Disabled	ⒺⒸ&s1C (c)	027 038 115 049 067 (99)	1B 26 73 31 43 (63)
Display Functions	ON	ⒺⒸY	027 089	1B 59
	OFF	ⒺⒸZ	027 090	1B 5A

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECIMAL VALUE
PCL VECTOR GRAPHICS SWITCHING/SET-UP PICTURE FRAME				
Enter PCL Mode	Use previous PCL cursor position	Esc%0A	027 037 048 65	1B 25 30 41
	Use current HP-GL/2pen position for cursor position	Esc%1A	027 037 049 65	1B 25 31 41
Enter HP-GL/2 Mode	Use previous HP-GL/2 pen position	Esc%0B	027 037 048 066	1B 25 30 42
	Use current PCL cursor position	Esc%1B	027 037 049 066	1B 25 31 42
	Stand-alone plotter mode	Esc%-1B	027 037 045 049 066	1B 25 2D 31 42
	Current PCL coordinate system/old HP-GL pen position	Esc%2B	027 037 050 066	1B 25 32 42
	Current PCL coordinate system/current PCL CAP	Esc%3B	027 037 051 066	1B 25 33 42
HP-GL/2 Plot Horizontal Size	Horizontal size in inches	Esc*c#K (k)	027 042 099 #...# 075 (107)	1B 2A 63 #... # 4B (6B)
HP-GL/2 Plot Vertical Size	Vertical size in inches	Esc*c#L (l)	027 042 099 #...# 076 (108)	1B 2A 63 #...# 4C (6C)
Set Picture Frame Anchor Point	Set anchor point to cursor position	Esc*c0T (t)	027 042 099 048 084 (116)	1B 2A 63 30 54 (74)
Picture Frame Horizontal Size	Decipoints	Esc*c#X (x)	027 042 099 #...# 088 (120)	1B 2A 63 #...# 58 (78)
Picture Frame Vertical Size	Decipoints	Esc*c#Y (y)	027 042 099 #...# 089 (121)	1B 2A 63 #...# 59 (79)
DUAL CONTEXT EXTENSIONS				
Enter PCL Mode	Esc%#A	0 - Retain previous PCL cursor position 1 - Use current HP-GL/2 pen position		
Reset	EscE	None		
Primary Font	FI	Font_ID		
Secondary Font	FN	Font_ID		
Scalable Or Bitmapped Fonts	SB	0 - Scalable fonts only 1 - Bitmapped fonts allowed		

Table A-1. HP PCL 5 Commands (continued)

FUNCTION	PARAMETER	COMMAND	DECIMAL VALUE	HEXADECFIMAL VALUE
COLOR COMMANDS				
Assign Color Index	Index Number	Ec*v#I (i)	027 042 118 #...# 073 (105)	1B 2A 76 #...# 49 (69)
Color Component One	1st Component	Ec*v#A (a)	027 042 118 #...# 065 (97)	1B 2A 76 #...# 41 (61)
Color Component Two	2nd Component	Ec*v#B (b)	027 042 118 #...# 066 (98)	1B 2A 76 #...# 42 (62)
Color Component Three	3rd Component	Ec*v#C (c)	027 042 118 #...# 067 (99)	1B 2A 76 #...# 43 (63)
Color Lookup Tables	# of Bytes	Ec*l#W[Data]	027 042 108 #...# 087	1B 2A 6C #...# 57
Configure Image Data	# of Bytes	Ec*v#W[Data]	027 042 118 #...# 087	1B 2A 76 #...# 57
Download Dither Matrix	# of Bytes	Ec*v#I (i)	027 042 118 #...# 073 (105)	1B 2A 76 #...# 49 (69)
Foreground Color	Index Number	Ec*v#S (s)	027 042 118 #...# 083 (115)	1B 2A 76 #...# 53 (73)
Gamma Correction	Gamma Number	Ec*t#I (i)	027 042 116 #...# 073 (105)	1B 2A 74 #...# 49 (69)
Monochrome Print Mode	Mixed Rendering	Ec&b0M (m)	027 038 062 048 077 (109)	1B 26 98 30 4D (6D)
	Gray Equivalent	Ec&b1M (m)	027 038 062 049 077 (109)	1B 26 98 31 4D (6D)
Palette Control ID	Palette ID #	Ec&p#I (i)	027 038 112 #...# 073 (105)	1B 26 70 #...# 49 (69)
Palette Control	Delete All Palettes in store	Ec&p0C (c)	027 038 112 048 067 (99)	1B 26 70 30 43 (63)
	Delete All Palettes in stack	Ec&p1C (c)	027 038 112 049 067 (99)	1B 26 70 31 43 (63)
	Delete Palette (last ID)	Ec&p2C (c)	027 038 112 050 067 (99)	1B 26 70 32 43 (63)
	Copy Palette	Ec&p6C (c)	027 038 112 054 067 (99)	1B 26 70 36 43 (63)
Push/Pop Palette	Push Palette	Ec*p0P (p)	027 042 112 048 080 (112)	1B 2A 70 30 50 (70)
	Pop Palette	Ec*p1P (p)	027 042 112 049 080 (112)	1B 2A 70 31 50 (70)
Render Algorithm	Continuous tone detail	Ec*t0J (j)	027 042 116 048 074 (106)	1B 2A 74 30 4A (6A)
	Snap to primaries	Ec*t1J (j)	027 042 116 049 074 (106)	1B 2A 74 31 4A (6A)
	Snap black/white, colors to black	Ec*t2J (j)	027 042 116 050 074 (106)	1B 2A 74 32 4A (6A)
	Device best dither	Ec*t3J (j)	027 042 116 051 074 (106)	1B 2A 74 33 4A (6A)
	Error diffusion	Ec*t4J (j)	027 042 116 052 074 (106)	1B 2A 74 34 4A (6A)
	Monochrome device best dither	Ec*t5J (j)	027 042 116 053 074 (106)	1B 2A 74 35 4A (6A)
	Monochrome error diffusion	Ec*t6J (j)	027 042 116 054 074 (106)	1B 2A 74 36 4A (6A)
	Cluster ordered dither	Ec*t7J (j)	027 042 116 055 074 (106)	1B 2A 74 37 4A (6A)
	Monochrome cluster ordered	Ec*t8J (j)	027 042 116 056 074 (106)	1B 2A 74 38 4A (6A)
	User-defined dither	Ec*t9J (j)	027 042 116 057 074 (106)	1B 2A 74 30 4A (6A)
	Monochrome user-defined dither	Ec*t10J (j)	027 042 116 049 048 074 (106)	1B 2A 74 31 30 4A (6A)
	Ordered dither	Ec*t11J (j)	027 042 116 049 049 074 (106)	1B 2A 74 31 31 4A (6A)
	Monochrome ordered dither	Ec*t12J (j)	027 042 116 049 050 074 (106)	1B 2A 74 31 32 4A (6A)
	Noise ordered dither	Ec*t13J (j)	027 042 116 049 051 074 (106)	1B 2A 74 31 33 4A (6A)
	Monochrome noise ordered dither	Ec*t14J (j)	027 042 116 049 052 074 (106)	1B 2A 74 31 34 4A (6A)
	Continuous tone smooth	Ec*t15J (j)	027 042 116 049 053 074 (106)	1B 2A 74 31 35 4A (6A)
	Mono. continuous tone detail	Ec*t16J (j)	027 042 116 049 054 074 (106)	1B 2A 74 31 36 4A (6A)
	Mono. continuous tone smooth	Ec*t17J (j)	027 042 116 049 055 074 (106)	1B 2A 74 31 37 4A (6A)
	Continuous tone basic	Ec*t18J (j)	027 042 116 049 056 074 (106)	1B 2A 74 31 38 4A (6A)
	Mono. continuous tone basic	Ec*t19J (j)	027 042 116 049 057 074 (106)	1B 2A 74 31 39 4A (6A)
Select Palette	Palette ID #	Ec&p#S (s)	027 038 112 #...# 083 (115)	1B 26 70 #...# 53 (73)
Set Viewing Illumination	# of Bytes	Ec*i#W[Data]	027 042 105 #...# 087	1B 2A 69 #...# 57
Simple Color	3-Plane Device CMY Palette	Ec*r-3U (u)	027 042 114 045 051 085 (117)	1B 2A 72 2D 33 55 (75)
	1-Plane K Palette	Ec*r1U (u)	027 042 114 049 085 (117)	1B 2A 72 31 55 (75)
	3-Plane Device RGB Palette	Ec*r3U (u)	027 042 114 051 085 (117)	1B 2A 72 33 55 (75)

Table A-2. HP-GL/2 Commands

COMMAND	MNEMONIC	PARAMETERS*
PALETTE EXTENSIONS		
Color Range	CR	[b_ref_red, w_ref_red, b_ref_grn, w_ref_grn, b_ref_blue, w_ref_blue];
Number of Pens	NP	[n];
Pen Color Assignment	PC	[pen [,red, green, blue]];
Transparency Mode	TR	0 - Off (opaque) 1 - On (transparent)
Screened Vectors	SV	[screen_type[,shading[,index]]]
VECTOR GROUP		
Arc Absolute	AA	x_center,y_center,sweep_angle [,chord_angle];
Arc Relative	AR	x_increment,y_increment,sweep_angle [,chord_angle];
Absolute Arc Three Point	AT	x_inter,y_inter,x_end,y_end[,chord_angle];
Bezier Absolute	BZ	x1_control_pt, y1_control_pt x2_control_pt, y2_control_pt x3_control_pt, y3_control_pt ... [x1_control_pt, y1_control_pt x2_control_pt, y2_control_pt x3_control_pt, y3_control_pt];
Bezier Relative	BR	x1_control_pt_increments, y1_control_pt_increments, x2_control_pt_increments, y2_control_pt_increments, x3_control_pt_increments, y3_control_pt_increments ... [x1_control_pt_increments, y1_control_pt_increments, x2_control_pt_increments, y2_control_pt_increments, x3_control_pt_increments, y3_control_pt_increments];
Circle	CI	radius [,chord angle];
Plot Absolute	PA	[x,y ... [,x,y]];
Plot Relative	PR	[x,y ... [,x,y]];
Pen Down	PD	[x,y ... [,x,y]];
Pen Up	PU	[x,y ... [,x,y]];
Relative Arc Three Point	RT	x_incr_inter,y_incr_inter,x_incr_end,y_incr_end[,chord angle];
Polyline Encoded	PE	[flag[val] coord pair ... [flag[val] coord pair]];

* Parameters in brackets are optional.

Table A-2. HP-GL/2 Commands (continued)

COMMAND	MNEMONIC	PARAMETERS*
POLYGON GROUP		
Fill Rectangle Absolute	RA	x_coordinate,y_coordinate;
Fill Rectangle Relative	RR	x_increment,y_increment;
Edge Rectangle Absolute	EA	x_coordinate,y_coordinate;
Edge Rectangle Relative	ER	x_increment,y_increment;
Fill Wedge	WG	radius,start_angle,sweep_angle[,chord_angle];
Edge Wedge	EW	radius,start_angle,sweep_angle[,chord_angle];
Polygon Mode	PM	polygon_definition;
Fill Polygon	FP	0- Odd/Even 1 - non-zero winding
Edge Polygon	EP	None

* Parameters in brackets are optional.

Table A-2. HP-GL/2 Commands (continued)

FUNCTION	MNEMONIC	PARAMETERS*
CHARACTER GROUP		
Select Standard Font	SS	None
Select Alternate Font	SA	None
Absolute Direction	DI	[run,rise];
Relative Direction	DR	[run,rise];
Absolute Character Size	SI	[width,height];
Relative Character Size	SR	[width,height];
Character Slant	SL	[tangent_of_angle];
Extra Space	ES	[width[,height]]
Standard Font Definition	SD	[kind,value ... [,kind,value]];
Alternate Font Definition	AD	[kind,value ... [,kind,value]];
Character Fill Mode	CF	[fill_mode[,edge_pen]];
Label Origin	LO	[position];
Label	LB	[char ... [char]]1bterm
Define Label Terminator	DT	[1bterm[,mode]];
Character Plot	CP	[spaces,lines];
Transparent Data	TD	[mode];
Define Variable Text Path	DV	[path[,line]];
LINE AND FILL ATTRIBUTES GROUP		
Line Type	LT	[line_type[,pattern_length[,mode]]];
Line Attributes	LA	[kind,value ... [,kind,value]];
Pen Width	PW	[width[,pen]];
Pen Width Unit Selection	WU	[type];
Select Pen	SP	[pen]; <i>(required, 1 for black (recommended) or 0 for white)</i>
Symbol Mode	SM	[char];
Fill Type	FT	[fill_type[,option1[,option2]]];
Anchor Corner	AC	[x_coordinate,y_coordinate];
Raster Fill Definition	RF	[index[,width,height,pen_nbr ... pen_nbr]]; <i>(width and height must be less than 255)</i>
User Defined Line Type	UL	[index[,gap1 ... gapn]];

* Parameters in brackets are optional.

Table A-2. HP-GL/2 Commands (continued)

FUNCTION	MNEMONIC	PARAMETERS*
CONFIGURATION AND STATUS GROUP		
Advance Full Page	PG	[n];
Scale	SC	[x1,x2,y1,y2[,type[,left,bottom]]]; or [x1,xfactor,y1,yfactor,2];
Input Window	IW	[xLL,yLL,xUR,yUR];
Input P1 and P2	IP	[p1x,p1y[,p2x,p2y]];
Input Relative P1 And P2	IR	[p1x,p1y[,p2x,p2y]];
Default Values	DF	None
Initialize	IN	[n];
Replot	RP	[n];
Rotate Coordinate System	RO	[angle];
TECHNICAL GRAPHICS EXTENSION		
Begin Plot	BP	[kind, value...[,kind, value]];
Chord Tolerance Mode	CT	[mode];
Download Character	DL	[charnum [[,up], x, y...[,up],x,y]];
Frame Advance	FR	
Media Type	MT	[type];
Merge Control	MC	[mode [, opcod]];
Output Error	OE	
Output Hardclip Limits	OH	
Output Identification	OI	
Output P1 and P2	OP	
Output Status	OS	
Pixel Placement	PP	[mode];
Plot Size	PS	[length [,width]];
Quality Level	QL	[quality level]

* Parameters in brackets are optional.

Table A-3. Control Codes

Function	Symbol	Decimal Value	Description
Backspace	B _S	8	Move one column left unless at left margin, in which case no action is taken.
Horizontal Tab	H _T	9	Move to the next horizontal tab stop. The tab stops are at the left margin, and every eight columns to the right of the left margin.
Line Feed	L _F	10	Move to the next print line while maintaining current column position.
Form Feed	F _F	12	Move to the first line at top of the next page while maintaining current column position.
Carriage Return	C _R	13	Move to the left margin on the current print line.
Shift Out	S _O	14	Select characters that follow from the current secondary font until receipt of a Shift In.
Shift In	S _I	15	Select characters that follow from the current primary font until receipt of a Shift Out.
Escape	E _C	27	Indicates the beginning of a special control sequence (escape sequence).
Space	S _P	32	Move one column to the right unless already at the right margin, in which case no action is taken.